

PCT/GB03/00184

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Amended Claims (Art 34 PCT)

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ART 34 AMDT

1. A method for the removal of elemental sulphur from a non-aqueous liquid feedstock comprising passing the feedstock through a bed of an ion exchange resin containing primary or secondary amino groups.
2. A method according to claim 1 wherein the feedstock is passed through a bed of a hydrogen sulphide absorbent after passage through the bed of the ion exchange resin.
3. A method according to claim 1 or claim 2 wherein water is removed from the ion exchange resin before use.
4. A method according to any one of claims 1 to 3 wherein the ion exchange resin is in the form of a fixed bed of shaped units having maximum and minimum dimensions in the range 0.5 to 10 mm.
5. A method according to any one of claims 1 to 4 wherein the feedstock is contacted with the ion exchange resin bed at temperatures in the range -10°C to +100°C under sufficient pressure that the feedstock is in the liquid state.
6. A method according to any one of claims 1 to 5 wherein the ion exchange resin is periodically regenerated by treatment with an acid.
7. A method according to any one of claims 1 to 6 where the liquid is a hydrocarbon.
8. A method according to claim 7 wherein the liquid is selected from natural gas liquids and gasoline.
9. A method for the production of a sulphided ion exchange resin comprising passing a non-aqueous liquid feedstock containing elemental sulphur or organic or inorganic di- or poly-sulphides through a bed of an ion exchange resin containing primary or secondary amino groups.

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10. A sulphided ion exchange resin containing primary or secondary amino groups obtained by a method as claimed in any of claims 1 to 9.
11. A method for the removal of mercury and organic mercury compounds from a non-aqueous liquid feedstock comprising passing the feedstock through a bed of a sulphided ion exchange resin containing primary or secondary amino groups according to claim 10.
12. A method for the removal of elemental sulphur and of mercury and organic mercury compounds from a non-aqueous liquid feedstock comprising passing the feedstock through a bed of an ion exchange resin containing primary or secondary amino groups wherein at least the inlet portion of the bed of ion exchange resin is sulphided before a mercury containing stream is passed through the bed.
13. A method according to any one of claims 11 to 12 wherein the liquid is a hydrocarbon.